12/9/2 (Item 2 from file: 347)
DIALOG(R)File 347:JAPIO

06340601
DEVELOPER AND **IMAGE FORMING** DEVICE

PUB. NO.: 11-282205 [JP 11282205 A]
PUBLISHED: October 15, 1999 (19991015)
INVENTOR(s): **TOHATA NOBUO**
KOIZUMI YUKIO
APPLICANT(s): TOSHIBA CORP
APPL. NO.: 10-083642 [JP 9883642]
FILED: March 30, 1998 (19980330)
INTL CLASS: G03G-009/087; G03G-009/08; G03G-015/20

ABSTRACT

PROBLEM TO BE SOLVED: To obtain good fixing property and storage property by incorporating a coloring agent and a binder resin using a specified styrene acryl resin.

SOLUTION: This developer contains a binder resin and a coloring agent. The binder resin contains a low mol.wt. styrene-acryl resin with the mol.wt. distribution having a peak in 3000 to 8000 range and a high mol.wt. styrene-scryl resin having a peak in 100000 to 400000 range. The Tg of the whole resin is 56 to 64°C, and the starting temp. of the Tg endothermic process is ≥45°C for each of the low mol.wt. and high mol.wt. styrene acryl resin. The starting temp. L and H of the endothermic process of the low mol.wt. and the high mol.wt. styrene acryl resins, respectively, are preferably controlled to satisfy the relation of L≥H≥45°C. Relating to the binder resin, the low mol.wt. styrene- acryl resin is preferably included by 30 to 70 wt.% based on the whole binder resin. Further, silica particles after hydrophobic treatment may be added by 0.1 to 1.5 wt.% based on the whole toner weight.

12/9/5 (Item 5 from file: 347)
DIALOG(R)File 347:JAPIO

04968848
TONER AND **IMAGE FORMING** DEVICE USING THE SAME

PUB. NO.: 07-261448 [JP 7261448 A]
PUBLISHED: October 13, 1995 (19951013)
INVENTOR(s): TEZUKA TOSHIAKI
TOHATA NOBUO
APPLICANT(s): TOSHIBA CORP [000307] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 06-050885 [JP 9450885]
FILED: March 22, 1994 (19940322)
INTL CLASS: [6] G03G-009/08; G03G-015/08
JAPIO CLASS: 29.4 (PRECISION INSTRUMENTS -- Business Machines)
JAPIO KEYWORD:R002 (LASERS); R124 (CHEMISTRY -- Epoxy Resins)

ABSTRACT

PURPOSE: To prevent the generation of a drum filming layer and to obtain a constant picture even at the time of **forming image** for a long time by specifying the ratio of the wax content in the whole toner to the

wax content in a specific toner in the whole toner.
CONSTITUTION: When the wax content in the whole toner is expressed by A(%) and the wax content in the toner having <=5μm particle diameter in the whole toner is expressed by B(%), B/A is controlled to <=1.6. Since the wax content is not to excess even in the toner of small particle diameter side of <=5μm by using the toner, the dispersion of the wax content is optimized as the whole, cleaning defect is not generated even if the toner is used for a continuous copying process and the formation of the toner filming layer is prevented. And as the binder resin used for the toner production, a copolymer of styrene and its substituted compound or an acrylic resin conventionally used as a binder resin for development can be used
?

17/9/1 (Item 1 from file: 347)
DIALOG(R)File 347:JAPIO

07631738
ROTATIONAL SPEED CONTROL METHOD AND IMAGING APPARATUS

PUB. NO.: 2003-125591 [JP 2003125591 A]
PUBLISHED: April 25, 2003 (20030425)
INVENTOR(s): UEDA TADAYUKI
MARUYAMA HIROYUKI
IZUMIYA KENJI
OKUTOMI TAKAHARU
KISHI SHINOBU
OGATA TOMOHITO
NISHIKAWA HIDEFUMI
APPLICANT(s): KONICA CORP
APPL. NO.: 2001-316444 [JP 2001316444]
FILED: October 15, 2001 (20011015)
INTL CLASS: H02P-005/00; G03G-015/01; G03G-015/08; G03G-021/10; G03G-021/14

ABSTRACT

PROBLEM TO BE SOLVED: To obtain an imaging apparatus in which highly accurate circumferential speed control is performed while exhibiting excellent economy.

SOLUTION: On a photoreceptor drum 10 being rotated by a drive motor to **form** an **image** , means 12 for putting marks at a constant time interval, a mark sensor 41 for making possible to read out the mark constantly, means for storing the interval of marks thus read out, means for operating the rotational characteristics of the photoreceptor drum 10 from the interval of marks thus read out, means for altering the drive command value of the drive motor from digitized operational results, a unit 42 dedicated for cleaning a mark written by the mark writing means 12 and visualized prior to image transfer, and a **recycle** means for carrying **toner** collected by the cleaning unit 42 to a developer 13 are provided.

17/9/2 (Item 2 from file: 347)
DIALOG(R)File 347:JAPIO

06454201 **Image available**
IMAGE FORMING DEVICE

PUB. NO.: 2000-039774 [JP 2000039774 A]
PUBLISHED: February 08, 2000 (20000208)
INVENTOR(s): TAKEUCHI NOBUTAKA
APPLICANT(s): RICOH CO LTD
APPL. NO.: 10-223628 [JP 98223628]
FILED: July 22, 1998 (19980722)
INTL CLASS: G03G-015/08; G03G-021/10

ABSTRACT

PROBLEM TO BE SOLVED: To prevent an abnormal image by controlling toner carrying amount by a toner carrying means in accordance with carried toner amount.

SOLUTION: The toner remaining on a photoreceptor 3 after transfer is scraped by a cleaning blade, and the scraped **recycled toner** is carried to a toner carrying screw 9 by a recycling screw 27. The screw 9 carries the toner from the screw 27 to a developing device 5, and the ***recycled*** ***toner*** is restored to the device 5. By repeating such a process, the rate of the **recycled toner** in two-component developer is increased, so that the toner concentration in the two-component developer gets high. When a magnetic permeability sensor 11 detects that the toner concentration gets high, it transmits a signal to a control means 12, and the control means 12 increases the **rotation speed** of the screw 9 so as to make the toner carrying amount large in this device. Thus, the toner is hardly retained and is prevented from dripping.

?

10/9/1 (Item 1 from file: 347)
DIALOG(R)File 347:JAPIO

06411102 **Image available**
IMAGE FORMING DEVICE

PUB. NO.: 11-352758 [JP 11352758 A]
PUBLISHED: December 24, 1999 (19991224)
INVENTOR(s): KIMURA NAOYUKI
KAI SO
HAYAMA YUKO
APPLICANT(s): RICOH CO LTD
APPL. NO.: 10-176652 [JP 98176652]
FILED: June 09, 1998 (19980609)
INTL CLASS: G03G-015/06; G03G-015/00; G03G-015/08; G03G-015/08

ABSTRACT

PROBLEM TO BE SOLVED: To provide an **image forming** device which maintains, even in the case where the toner agglomeration degree changes, a fixed amount of toner attached to the surface of an image carrier, always obtains a stable image density, saves the space and reduces the cost.

SOLUTION: The device uses, as a means for detecting the toner agglomeration degree, stir screws 15 and 16 for stirring developer, and has a controller 50 for controlling, based on changes in **rotating torques** of them, a development bias which is applied to a developing sleeve 11. Since this makes it possible to control so that the amount of toner attached to the photoreceptor 1 is fixed, the stable image density can be obtained even in the case the toner agglomeration degree changes. Also, even in the case where toner having a different agglomeration degree is mixed into it for **toner recycling**, since the stable image density can be obtained by the control, it makes it unnecessary to sort toners of different agglomeration degrees and makes it possible to save space and reduce the cost.

?

11/9/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

016304788 **Image available**
WPI Acc No: 2004-462683/200444
XRAM Acc No: C04-172996
XRPX Acc No: N04-366301
Electrostatically charged image developing toner manufacturing method e.g. for use with developing agent, involves setting specific temperatures in barrel during fresh and recycled toner mixing **processes**
Patent Assignee: RICOH KK (RICO)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 2004101845	A	20040402	JP 2002263302	A	20020909	200444	B

Priority Applications (No Type Date): JP 2002263302 A 20020909
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2004101845	A		15	G03G-009/087	

Abstract (Basic): JP 2004101845 A
NOVELTY - The relationship between the temperatures (A,B) of barrel in a kneading machine, during fresh **mixing** process and **recycled toner mixing** process, respectively, is 1.07B at most A at most 1.46B. The relationship between the softening points (Bn,Sn) of toner produced by fresh **mixing** process and **recycled toner mixing** process, respectively, is Sn/Bn at most 1.05.
DETAILED DESCRIPTION - The toner particles are produced by **mixing** resin binder, mold release agent, pigment, electrical charging control agent, in kneading machine. The kneaded substance is cooled and classified. The toner particles of size less than preset value, are recycled into the machine. The **rotating speed** of screw in the machine is higher than normal speed, during **mixing** of **recycled toner** particles. The raw material supply amount during **mixing** of **recycled toner** particles, is more than that of normal **mixing** process. INDEPENDENT CLAIMS are also included for the following:
(1) electrostatically charged image developing toner which consists of resin binder with mold release particles whose diameter, is 0.1-1 mum;
(2) developing agent which contains toner and carrier; and
(3) image forming method.
USE - For developing electrostatic image during electrostatic recording and electrostatic printing processes.
ADVANTAGE - Toner of preset particle size is produced by which image fixing property is improved.
DESCRIPTION OF DRAWING(S) - The figure shows a schematic view explaining electrostatically charged image developing toner manufacturing method. (Drawing includes non-English language text).
pp; 15 DwgNo 1/2
Title Terms: ELECTROSTATIC; CHARGE; IMAGE; DEVELOP; TONER; MANUFACTURE; METHOD; DEVELOP; AGENT; SET; SPECIFIC; TEMPERATURE; BARREL; FRESH; RECYCLE; TONER; **MIX** ; PROCESS
Derwent Class: A89; G08; P84; S06
International Patent Class (Main): G03G-009/087
File Segment: CPI; EPI; EngPI
Manual Codes (CPI/A-N): A11-A03; A12-L05C2; G06-G05; G06-G07
Manual Codes (EPI/S-X): S06-A04C5

Polymer Indexing (PS):
<01>
001 2004; P0000
002 2004; ND01; Q9999 Q6791; Q9999 Q8639 Q8617 Q8606

11/9/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

010507692 **Image available**
WPI Acc No: 1996-004643/199601
XRPX Acc No: N96-004331
Image formation appts - has toner recycling **mechanism that maintains continuous and simultaneous rotation of toner** stir **member**
Patent Assignee: KONICA CORP (KONS)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 7281532	A	19951027	JP 9470856	A	19940408	199601	B

Priority Applications (No Type Date): JP 9470856 A 19940408
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 7281532	A		6	G03G-015/08	

Abstract (Basic): JP 7281532 A
The image formation appts enables the switching of linear recording density by changing the conveyance speed of a development sleeve (33A). A **toner recycling** mechanism uses the residual toner collected from the image formation body again. The rotational speed of a development machine (33) with built-in toner **stir** member comprising a **stir** board (303) and conveyance screws (304,305) is maintained as a constant. The speed does not depend on the switching of linear recording density. The **toner recycling** mechanism maintains the continuous and simultaneous rotation of toner **stir** member.
ADVANTAGE - Forms image of high quality regardless of change in recording density. Does not decelerate electrification speed of toner **stir** member even when speed of development **speed** is decreased and **rotation** is ended.
Dwg.1/7
Title Terms: IMAGE; FORMATION; APPARATUS; TONER; RECYCLE; MECHANISM; MAINTAIN; CONTINUOUS; SIMULTANEOUS; ROTATING; TONER; **STIR** ; MEMBER
Derwent Class: P84; S06; T04
International Patent Class (Main): G03G-015/08
File Segment: EPI; EngPI
Manual Codes (EPI/S-X): S06-A04A1; T04-G04

11/9/3 (Item 1 from file: 347)
DIALOG(R)File 347:JAPIO

04988932 **Image available**
IMAGE-FORMING DEVICE

PUB. NO.: 07-281532 [JP 7281532 A]
PUBLISHED: October 27, 1995 (19951027)
INVENTOR(s): NISHIDA SATOSHI
MOTOHASHI MITSUO

YOSHINO KUNIHISA
TAKAHASHI AKIRA
APPLICANT(s): KONICA CORP [000127] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 06-070856 [JP 9470856]
FILED: April 08, 1994 (19940408)
INTL CLASS: [6] G03G-015/08; G03G-015/08
JAPIO CLASS: 29.4 (PRECISION INSTRUMENTS -- Business Machines)
JAPIO KEYWORD:R002 (LASERS)

ABSTRACT

PURPOSE: To smoothly continue **toner recycling** even after development without decreasing rising speed in an amount of toner electrification irrespective of a decrease in developing speed.

CONSTITUTION: Toner- **stirring** members (a **stirring** plate 303 and carrying screws 304 and 305) which a developing unit 33 incorporates are driven by driving systems different from that of a developing sleeve 33A. Even when the **rotating speed** of the developing sleeve 33A changes due to the changeover of recording- line density, the **stirring** members maintain constant rotating speeds. Even after the drive of the developing sleeve 33A finishes, the drive is made to continue during the operation of a recycling mechanism.
?

14/9/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

015499235 **Image available**
WPI Acc No: 2003-561382/200353
XRAM Acc No: C03-151452
XRPX Acc No: N03-446289

Toner manufacturing system for developing electrostatic image in electrophotography, has mechanical grinder for performing impact and shearing ground binder resin and coloring agent to which air flowed is recycled

Patent Assignee: RICOH KK (RICO)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 2002273250	A	20020924	JP 200183727	A	20010322	200353	B

Priority Applications (No Type Date): JP 200183727 A 20010322
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2002273250	A		4	B02C-013/288	

Abstract (Basic): JP 2002273250 A

NOVELTY - A toner manufacturing system has a mechanical grinder (4) for performing impact and shearing of ground binder resin and a coloring agent, a kneader for melting kneading of the ground material and a pulverization chamber installed with a rotor and a liner. The mechanical grinder performs fine grinding between the rotor and liner. Air flowed to the mechanical grinder is recycled with the ground material.

DETAILED DESCRIPTION - A toner manufacturing system has a mechanical grinder (4) for performing impact and shearing of ground binder resin and coloring agent, a kneader for melting kneading of ground material and a pulverization chamber installed with a rotor and a liner for performing high- **speed rotation** . The mechanical grinder performs fine grinding between the rotor and liner. Air flowed to the mechanical grinder is recycled with the ground material. The melting kneaded material is solidified by cooling.

USE - For developing electrostatic image in electrophotography.

ADVANTAGE - The energy supplied for controlling temperature and humidity are reduced in the toner manufacturing system. Thus the toner manufacturing system conserves energy and has high efficiency. Since air ejected from the mechanical grinder is **recycled** in the **toner** manufacturing system, energy is saved and efficiency of producing toner is increased.

DESCRIPTION OF DRAWING(S) - The figure shows the flowchart of the toner manufacturing system. (Drawing includes non-English language text).

Thermostat (1)
Dehumidifier (2)
Mechanical grinder (4)
Secondary air feeder (8)
pp; 4 DwgNo 1/1

Technology Focus:

TECHNOLOGY FOCUS - MECHANICAL ENGINEERING - Preferred Components: The toner manufacturing system further has a dehumidifier (2) provided in the air supply side of the mechanical grinder. The dew point temperature of air supplied to the mechanical grinder is controlled to less than 0degreesC by the dehumidifier. Air ejected from the mechanical grinder with the ground material is supplied to the air

inflow portion of the dehumidifier. The toner manufacturing system further has a thermostat (1) provided in the air supply side of the mechanical grinder. The air supplied to the mechanical grinder is controlled to less than 20degreesC by the thermostat. The toner manufacturing system further has a secondary air feeder (8) provided in the air supply side of the mechanical grinder. The secondary air from the secondary air feeder is supplied to the mechanical grinder based on the load of the mechanical grinder. The exhaust-gas temperature of the mechanical grinder is controlled to less than 50degreesC. The rotor has circumferential speed of less than 170 m/second.

Title Terms: TONER; MANUFACTURE; SYSTEM; DEVELOP; ELECTROSTATIC; IMAGE; ELECTROPHOTOGRAPHIC; MECHANICAL; GRIND; PERFORMANCE; IMPACT; SHEAR; GROUND; BIND; RESIN; COLOUR; AGENT; AIR; FLOW; RECYCLE
Derwent Class: A89; G08; P41; P84; S06
International Patent Class (Main): B02C-013/288
International Patent Class (Additional): B02C-013/10; B02C-013/26; B02C-019/18; B02C-023/34; G03G-009/087
File Segment: CPI; EPI; EngPI
Manual Codes (CPI/A-N): A11-A03; A11-A04; A12-L05C2; G06-G05
Manual Codes (EPI/S-X): S06-A04C; S06-A04C5
Polymer Indexing (PS):
<01>
001 018; P0000; S9999 S1387; S9999 S1456-R
002 018; ND01; Q9999 Q8639 Q8617 Q8606; N9999 N6155

14/9/2 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX

014916656 **Image available**
WPI Acc No: 2002-737363/200280
XRPX Acc No: N02-581625

Toner recycling **classifier for electrophotographic image forming device e.g. copier, has fur brush whose rotational speed is larger than filter, and which is coaxially arranged in filter**

Patent Assignee: RICOH KK (RICO)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 2002311768	A	20021025	JP 2001113851	A	20010412	200280	B

Priority Applications (No Type Date): JP 2001113851 A 20010412
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2002311768	A		6	G03G-021/10	

Abstract (Basic): JP 2002311768 A

NOVELTY - A fur brush (12) is coaxially arranged in a cylindrical filter, and **rotates** at a different **speed** but in the same direction as the filter. The fur brush has a larger rotational speed than the filter.

USE - For electrophotographic image forming device e.g. copier, printer, facsimile.

ADVANTAGE - Toner jamming within classifier is prevented.

DESCRIPTION OF DRAWING(S) - The figure shows the relationship of the rotational speeds of a fur brush and a frame. (Drawing includes non-English language text).

Fur brush (12)

pp; 6 DwgNo 5/6

Title Terms: TONER; RECYCLE; CLASSIFY; ELECTROPHOTOGRAPHIC; IMAGE; FORMING;

DEVICE; COPY; FUR; BRUSH; ROTATING; SPEED; LARGER; FILTER; COAXIAL; ARRANGE; FILTER
Derwent Class: P43; P84; S06
International Patent Class (Main): G03G-021/10
International Patent Class (Additional): B07B-001/22; B07B-001/52
File Segment: EPI; EngPI
Manual Codes (EPI/S-X): S06-A10C

14/9/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014360922 **Image available**
WPI Acc No: 2002-181623/200224
XRPX Acc No: N02-138100
Recycled toner **classifier e.g. for printer, has mesh-like toner classification unit which is** rotated **at a different** speed **when compared to toner recovery coil** rotation speed
Patent Assignee: RICOH KK (RICO)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 2001175137	A	20010629	JP 99357925	A	19991216	200224	B

Priority Applications (No Type Date): JP 99357925 A 19991216
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2001175137	A		12	G03G-021/10	

Abstract (Basic): JP 2001175137 A
NOVELTY - A cleaning blade removes the toner remaining on photoreceptor after image transfer to sheet. A toner conveying pipe (15) which conveys the removed toner, has a rotary toner recovery coil (33). A mesh-like toner classification unit (40) is rotated in the same direction as the toner recovery coil but at different speed. The classified toner is conveyed by a pump (19) to an image development device.
USE - For copier, printer, facsimile or compound machine.
ADVANTAGE - Causing of toner jamming is eliminated and the toner is reliably transferred with as simple component.
DESCRIPTION OF DRAWING(S) - The figure shows the sectional view of **recycled toner** classifier.
Toner conveying pipe (15)
Pump (19)
Rotary toner recovery coil (33)
Toner classification unit (40)
pp; 12 DwgNo 6/11
Title Terms: RECYCLE; TONER; CLASSIFY; PRINT; MESH; TONER; CLASSIFY; UNIT; ROTATING; SPEED; COMPARE; TONER; RECOVER; COIL; ROTATING; SPEED
Derwent Class: P84; S06; T04; W02
International Patent Class (Main): G03G-021/10
International Patent Class (Additional): G03G-015/08
File Segment: EPI; EngPI
Manual Codes (EPI/S-X): S06-A10C; T04-G04; W02-J02B2B; W02-J07

14/9/4 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013701349 **Image available**
WPI Acc No: 2001-185573/200119
XRAM Acc No: C01-056187
XRPX Acc No: N01-132588

Recording sheet for copier, has bar code marks indicating predetermined attributes of paper, formed on one of its edges

Patent Assignee: MINOLTA CAMERA KK (MIOC)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 2000356861	A	20001226	JP 99169436	A	19990616	200119	B

Priority Applications (No Type Date): JP 99169436 A 19990616
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2000356861	A		25	G03G-007/00	

Abstract (Basic): JP 2000356861 A

NOVELTY - Bar code marks (AM5,AM6) are formed of fluorescent paint or moisture sensitive coat. The marks indicate attributes such as basic weight, thickness, crease line direction, whiteness, non-transparency, surface finish state, pulp composition, moisture content, glossiness, air permeability, pH, bending resistance, smoothness, surface electrical resistance, volume electrical resistance and paper size.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for the image forming device which has an attribute detector which detects the attributes of the paper. The control apparatus uses the detected attribute information to form image on the paper. Image forming velocity and image gradation property are controlled based on attribute information. A contact roller applies preset pressure to the pick-up roller. The **rotation speed** of pick-up roller is controlled based on attribute information of paper. The image development apparatus forms the toner image on the photoreceptor and the toner image is transferred by the transfer roller that is controlled based on attribute information. **Toner recycle** apparatus returns the residual collected by cleaning mechanism, to the toner development apparatus at predetermined rate, based on attribute information. The curl of recording sheet is corrected by curl correction apparatus whose correction intensity is controlled depending on attribute information.

USE - For image forming device such as copier, printer.

ADVANTAGE - The image forming device detects the attributes of the paper automatically and forms a suitable stable image on the sheet.

DESCRIPTION OF DRAWING(S) - The figure shows the laminated papers.

Recording sheet (94)

Bar code marks (AM5,AM6)

pp; 25 DwgNo 4/24

Title Terms: RECORD; SHEET; COPY; BAR; CODE; MARK; INDICATE; PREDETERMINED; ATTRIBUTE; PAPER; FORMING; ONE; EDGE
Derwent Class: G08; P76; P84; Q36; S06; T04
International Patent Class (Main): G03G-007/00
International Patent Class (Additional): B42D-015/00; B65H-029/70; G03G-015/16; G03G-021/00; G03G-021/10
File Segment: CPI; EPI; EngPI
Manual Codes (CPI/A-N): G06-G08
Manual Codes (EPI/S-X): S06-A01X; T04-C02

14/9/5 (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX

010893210 **Image available**
WPI Acc No: 1996-390161/199639
XRPX Acc No: N96-328724
Image forming appts. with cleaning device e.g. copier, printer - has cleaning roller that electrically attracts remaining toner on image holder and cleans image holder surface
Patent Assignee: RICOH KK (RICO)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 8190330	A	19960723	JP 952896	A	19950111	199639	B

Priority Applications (No Type Date): JP 952896 A 19950111
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 8190330	A		14	G03G-021/10	

Abstract (Basic): JP 8190330 A
The appts. has a photoconductive image holder (11) that **rotates** at a constant **speed** . An electrification roller (12) electrifies the surface of the image holder. An image exposure device exposes an image on the surface of a uniformly-charged image holder that forms an electrostatic latent image. A development device (13) develops the electrostatic latent image used as a toner image. A transfer roller (14) transfers the toner image on the image holder transfer area.
A cleaning roller (34) attracts electrically the remaining toner which cleans the surface of the image holder after passing the transfer area. A fixing device fixes the toner image on a transfer material.
USE/ADVANTAGE - For e.g. facsimile. Prevents image non-uniformity on image exposure device, thus obtains high-quality image. Provides simple mechanism that **recycles toner** . Minimises deterioration on discharged cleaning surface. Attains high-resolution without separating cleaning device from image holder and without passing load fluctuation to image holder.
Dwg.1/9
Title Terms: IMAGE; FORMING; APPARATUS; CLEAN; DEVICE; COPY; PRINT; CLEAN; ROLL; ELECTRIC; ATTRACT; REMAINING; TONER; IMAGE; HOLD; CLEAN; IMAGE; HOLD; SURFACE
Derwent Class: P84; S06; T04; W02
International Patent Class (Main): G03G-021/10
File Segment: EPI; EngPI
Manual Codes (EPI/S-X): S06-A07; S06-A10A; T04-G04; W02-J02B; W02-J05

14/9/6 (Item 1 from file: 347)
DIALOG(R)File 347:JAPIO

07988911 **Image available**
RECYCLED PROCESS CARTRIDGE DETECTION MEANS AND IMAGE FORMING APPARATUS

PUB. NO.: 2004-101670 [JP 2004101670 A]
PUBLISHED: April 02, 2004 (20040402)
INVENTOR(s): FURUMIYA NOBURO
INAMI SATOSHI
NAMIKI TAKAYUKI
BABA DAISUKE
APPLICANT(s): CANON INC
APPL. NO.: 2002-260873 [JP 2002260873]
FILED: September 06, 2002 (20020906)
INTL CLASS: G03G-021/00; G03G-015/00; G03G-015/02

ABSTRACT

PROBLEM TO BE SOLVED: To detect whether a cartridge which is not equipped with a memory tag is a recycled cartridge or not.

SOLUTION: An amount of remaining toner and the value Iac of a charging current flowing to a drum are detected. If Iac is larger than a predetermined current value, the amount of remaining toner is larger than a predetermined amount, and the value and the amount are different from those detected previously, the cartridge is detected as a **recycled** cartridge refilled with **toner** . In the case the cartridge is detected as recycled, processing conditions (development bias, processing **speed** , multiple pre-**rotation** , prerotating time, etc.) are altered to optimum conditions.

14/9/7 (Item 2 from file: 347)

07572804 **Image available**
TWO-COMPONENT DEVELOPER AND METHOD FOR FORMING IMAGE BY USING THE SAME

PUB. NO.: 2003-066645 [JP 2003066645 A]
PUBLISHED: March 05, 2003 (20030305)
INVENTOR(s): AOKI MITSUO
MATSUDA HIROAKI
APPLICANT(s): RICOH CO LTD
APPL. NO.: 2001-261588 [JP 2001261588]
FILED: August 30, 2001 (20010830)
INTL CLASS: G03G-009/08; G03G-005/147; G03G-009/113; G03G-015/08; G03G-021/10

ABSTRACT

PROBLEM TO BE SOLVED: To provide a two-component developer with which a high-quality image can be formed and to provide an electrophotographic method for forming an image by using the developer.

SOLUTION: The two-component developer consists of a carrier and a toner in which wax is dispersed. The toner is prepared by using titanium oxide fine powder and silica fine powder together in the ranges of the weight WTi of titanium oxide and the weight WSi of silica satisfying the conditions of (1) 0.4(WTi/WSi(1.0 and (2) 1.0(WTi+WSi(2.0. The two-component developer can be effectively used for the formation of an image in an electrophotographic image forming device having a **toner recycling** mechanism and a **rotating speed** of a photoreceptor having a specified structure as fast as 350 to 550 mm/sec.

14/9/8 (Item 3 from file: 347)

07443257 **Image available**
TONER RECYCLING AND CLASSIFYING EQUIPMENT

PUB. NO.: 2002-311768 [JP 2002311768 A]
PUBLISHED: October 25, 2002 (20021025)
INVENTOR(s): ARAI YUJI
APPLICANT(s): RICOH CO LTD
APPL. NO.: 2001-113851 [JP 2001113851]
FILED: April 12, 2001 (20010412)
INTL CLASS: G03G-021/10; B07B-001/22; B07B-001/52

ABSTRACT

PROBLEM TO BE SOLVED: To provide a **toner recycling** and classifying equipment which is capable of effectively removing paper dust, toner pseudo-agglomeration, etc., from the recovered toners recovered by means of a cleaning section of an image forming device of an electronic system without the occurrence of clogging.

SOLUTION: The **toner recycling** and classifying equipment for classifying the recovered toners after image forming treatment to the **toners** to be **recycled** and the impurities to be discarded by rotating filter means (a net section 11b and a frame section 11a) of a cylindrical shape and a fur brush (12) which is arranged coaxially with the filter means within the filter and **rotates** by having a **speed** difference in the same direction as the direction of the filter means is set greater in the **rotating speed** of the fur brush (12) than the **rotating speed** of the filter means (the net section 11b and the frame section 11a).

14/9/9 (Item 4 from file: 347)

06454201 **Image available**
IMAGE FORMING DEVICE

PUB. NO.: 2000-039774 [JP 2000039774 A]
PUBLISHED: February 08, 2000 (20000208)
INVENTOR(s): TAKEUCHI NOBUTAKA
APPLICANT(s): RICOH CO LTD
APPL. NO.: 10-223628 [JP 98223628]
FILED: July 22, 1998 (19980722)
INTL CLASS: G03G-015/08; G03G-021/10

ABSTRACT

PROBLEM TO BE SOLVED: To prevent an abnormal image by controlling toner carrying amount by a toner carrying means in accordance with carried toner amount.

SOLUTION: The toner remaining on a photoreceptor 3 after transfer is scraped by a cleaning blade, and the scraped **recycled toner** is carried to a toner carrying screw 9 by a recycling screw 27. The screw 9 carries the toner from the screw 27 to a developing device 5, and the **recycled toner** is restored to the device 5. By repeating such a process, the rate of the **recycled toner** in two-component developer is increased, so that the toner concentration in the two-component developer gets high. When a magnetic permeability sensor 11 detects that the toner concentration gets high, it transmits a signal to a control means 12, and the control means 12

increases the **rotation speed** of the screw 9 so as to make the toner carrying amount large in this device. Thus, the toner is hardly retained and is prevented from dripping.

?

17/9/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX

010484091 **Image available**
WPI Acc No: 1995-385411/199550
Process cartridge for image forming device e.g. photocopiers, printer - uses guide member positioned between rotational shaft and toner **agitating member which minimises void space**
Patent Assignee: CANON KK (CANO)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 7253707	A	19951003	JP 9445518	A	19940316	199550	B

Priority Applications (No Type Date): JP 9445518 A 19940316
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 7253707	A		8	G03G-015/08	

Abstract (Basic): JP 7253707 A

The process cartridge consists of a **toner** container (12) which is attached to an image retaining body. A **toner** agitating member is joined to the **toner** container which balances with the position of a development member, held by a development frame (13).

The development member drives the **toner** agitating member by means of a shaft, whose centre of rotation is positioned to minimise the void space using a guide member (20). The **toner** container and development frame are fused and cartridge is **recycled** .

ADVANTAGE - Enables easily **recycling** of used cartridge. Provides good rotational accuracy of shaft. Stifles vibration noise generated during operation. Generates uniform **rotational torque** . Prevents gap generation even when their exists difference in size.

Dwg.1/7
Title Terms: PROCESS; CARTRIDGE; IMAGE; FORMING; DEVICE; PHOTOCOPY; PRINT; GUIDE; MEMBER; POSITION; ROTATING; SHAFT; **TONER** ; AGITATE; MEMBER; MINIMISE; VOID; SPACE
Derwent Class: P84
International Patent Class (Main): G03G-015/08
International Patent Class (Additional): G03G-021/18
File Segment: EngPI
?